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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,563	12/14/2001	Philip D. Floyd	98706R	1245

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EXAMINER

BOUTSIKARIS, LEONIDAS

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/014,563

Applicant(s)

Floyd

Examiner
Leo Boutsikaris

Art Unit
2872



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on Jan 13, 2003

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-21 and 23-36 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1-20 is/are allowed.

6) Claim(s) 21 and 23-36 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

4) Interview Summary (PTO-413) Paper No(s). _____

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

6) Other: _____

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DETAILED ACTION

Reissue Applications

1. The original patent, or a statement as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.
2. The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

The oath or declaration must identify at least one error being relied upon as a basis for the reissue and that it is indeed an appropriate error for reissue (37 CFR 1.175(a)(1)). If new claims are presented, their differences from the original claims must be pointed out. See MPEP 1414. Here, the new, broader, claims 21-36 must be compared with original claims 1-20, concerning their scope with enough specificity to satisfy the statutory rule as set forth *supra*.

3. Claims 21-36 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the declaration is set forth in the discussion above in this Office action.

4. The amendment filed on 12/14/2001 proposes amendments to the claims of US Patent No. 6,002,507 that do not comply with 37 CFR 1.173(b), which sets forth the manner of making amendments in reissue applications. All new claims must be underlined. A supplemental paper correctly amending the reissue application is required.

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Claim Objections

5. Claims 21, 23-26, 30-34 are objected to because of the following informalities:

Claim 21 cites “polysilicon” in line 4 which lacks antecedent basis. It is suggested that lines 4 and 5 are interchanged.

Claim 30 cites both a hinge derived from a layer of polysilicon applied over the single crystal silicon component, and at least one polysilicon component derived from a layer of polysilicon applied over the single crystal silicon component, which contradicts the specification wherein a single component, e.g., the hinge is disclosed made from polysilicon. For examination purposes the latter case will be assumed.

Claims 23-26, 31-34 inherit the deficiency of claims 21 and 30 from which they depend.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 27, 30-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Motamedi. Motamedi discloses a MEMS device (Figs. 1 and 6a-6h, and lines 53-54 and 61-63, col. 4, and 4-5, col. 8) wherein a single crystal silicon (SCS) layer 120 is provided, which subsequently is patterned to form a MEMS component in the form of micro-mirror 124 (Fig. 6a), followed by deposition of polysilicon layers 132 on top of the patterned SCS (Fig. 6e). Furthermore, the SCS layer comprises a SOI wafer including a SCS layer attached to an insulator layer 122 (lines 34-38, col. 9). The polysilicon component e.g., the actuator 18 acts as a hinge connected to the movable mirror 25.

Allowable Subject Matter

8. Claims 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, provided the rejection, set forth in paragraph 3 of the present Office Action, is overcome.

9. Claims 1-20 are allowed.

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10. Claims 1-20, 21, 23-26, 28-29, 35-36 are allowed over the prior art for at least the reason that the prior art fails to teach or reasonably suggest, regarding claims 1-20 an integrated laser beam scanning structure, and a method for making such a structure, wherein a semiconductor light emitter is mounted in the recess of a wafer on which a deflecting and a torsional mirror are fashioned, and a light beam emitted from the light source is deflected by the deflecting mirror onto the torsional mirror, regarding claims 21, 23-26, 28-29, a MEMS formation method wherein a second MEMS component is formed by patterning the polysilicon, and regarding claims 35-36, a MEMS device further comprising a semiconductor emitter mounted in the recess and oriented to emit a light beam at the single crystal component, as set forth in the claimed combination.

The pertinent art of Swartz (US 5,625,483) discloses an integrated laser scanning device wherein a laser light source disposed on a silicon substrate emits light that is reflected from micromirrors also disposed on the substrate (Figs. 3 and 5). Sun (US 2002/0067533) discloses a MEMS-based scanner where a laser attached to a single crystal silicon substrate emits light towards a pair of mirrors made from a second layer (Fig. 14).

Response to Applicant's arguments

11. In response to Applicant's arguments (p. 4) that Motamedi does not disclose a hinge, the Examiner respectfully disagrees and notes that according to Webster's dictionary, a hinge is "a jointed or flexible device on which a door, lid or other swinging part turns". The mirror 16 turns on polysilicon component/actuator 21 as the latter is heated (lines 25-29, col. 4). Furthermore,

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incorporation of the matter of original claim 21 into claim 27 does not make claim 27 allowable since claim 21 was rejected in the prior Office Action.

Conclusion

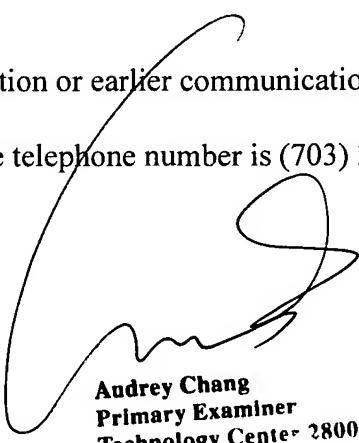
12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is (703) 306-5730.

Leo Boutsikaris, Ph.D.

January 29, 2003


Audrey Chang
Primary Examiner
Technology Center 2800

Recent Statutory Changes to 35 U.S.C. § 102(e)

On November 2, 2002, President Bush signed the 21st Century Department of Justice Appropriations Authorization Act (H.R. 2215) (Pub. L. 107-273, 116 Stat. 1758 (2002)), which further amended 35 U.S.C. § 102(e), as revised by the American Inventors Protection Act of 1999 (AIPA) (Pub. L. 106-113, 113 Stat. 1501 (1999)). The revised provisions in 35 U.S.C. § 102(e) are completely retroactive and effective immediately for all applications being examined or patents being reexamined. Until all of the Office's automated systems are updated to reflect the revised statute, citation to the revised statute in Office actions is provided by this attachment. This attachment also substitutes for any citation of the text of 35 U.S.C. § 102(e), if made, in the attached Office action.

The following is a quotation of the appropriate paragraph of 35 U.S.C. § 102 in view of the AIPA and H.R. 2215 that forms the basis for the rejections under this section made in the attached Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

35 U.S.C. § 102(e), as revised by the AIPA and H.R. 2215, applies to all qualifying references, except when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. For such patents, the prior art date is determined under 35 U.S.C. § 102(e) as it existed prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

The following is a quotation of the appropriate paragraph of 35 U.S.C. § 102 prior to the amendment by the AIPA that forms the basis for the rejections under this section made in the attached Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

For more information on revised 35 U.S.C. § 102(e) visit the USPTO website at www.uspto.gov or call the Office of Patent Legal Administration at (703) 305-1622.